

FILEID**LIBPUTOUT

J a

```
1 0001 0 MODULE LIB$PUT_OUTPUT (%TITLE'Library $PUT on device SYSSOUTPUT'
2 0002 0 IDENT = '1-006' ! File: LIBPUTOUT.B32 EDIT: SBL1006
3 0003 0 )
4 0004 1 BEGIN
5 0005 1
6 0006 1 ****
7 0007 1 ****
8 0008 1 *
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26 0026 1 *
27 0027 1 *
28 0028 1 ****
29 0029 1 *
30 0030 1 *
31 0031 1 ++
32 0032 1 FACILITY: General Utility Library
33 0033 1
34 0034 1 ABSTRACT:
35 0035 1
36 0036 1 Output a string as a record on device SYSSOUTPUT.
37 0037 1
38 0038 1 ENVIRONMENT: User Mode - AST re-entrant
39 0039 1
40 0040 1 AUTHOR: Thomas N. Hastings, CREATION DATE: 8-Aug-1977
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 Thomas N. Hastings, 8-Aug-1977: VERSION 0
45 0045 1 01 - original
46 0046 1 04 - change to SYSSOUTPUT
47 0047 1 05 - change to do OPEN at first time
48 0048 1 06 - change to set up RAB for message
49 0049 1 0-7 - fix comment
50 0050 1 0-9 - Put in carriage control. TNH 28-Oct-77
51 0051 1 0-11 - Change to STARLET library. DGP 20-Apr-78
52 0052 1 0-12 - Change REQUIRE files for VAX system build. DGP 28-Apr-78
53 0053 1 0-13 - Change STARLET to RTLSTARLE to avoid conflicts. DGP 1-May-78
54 0054 1 0-14 - Make wait if stream active, so AST re-entrant. TNH 29-July-78
55 0055 1 0-15 - Change file name to LIBPUTOUT.B32, and change the name of
56 0056 1 the REQUIRE file similarly. JBS 14-NOV-78
57 0057 1 1-001 - Update version number and copyright notice. JBS 16-NOV-78
```

LIB\$PUT_OUTPUT Library \$PUT on device SYSSOUTPUT
1-006

L 2
16-Sep-1984 01:08:17 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:39:18 [LIBRTL.SRC]LIBPUTOUT.B32;1

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: 58 0058 1 | 1-002 - Change REQUIRE file names from FOR... to OTS... JBS 07-DEC-78
59 0059 1 | 1-003 - Enhance to recognize additional classes of string descriptors
60 0060 1 | by invoking LIB\$ANALYZE_SDESC_R3 to extract length and
61 0061 1 | address of 1st data byte from descriptor.
62 0062 1 | Remove reference to OTSMAC.REQ. RKR 27-MAY-1981.
63 0063 1 | 1-004 - Add special-case code to process string descriptors that
64 0064 1 | 'read' like fixed string descriptors. RKR 7-OCT-1981.
65 0065 1 | 1-005 - Redirect jsb's from LIB\$ANALYZE_SDESC_R3 to
66 0066 1 | LIB\$ANALYZE_SDESC_R2. RKR 18-NOV-1981
67 0067 1 | 1-006 - Use prologue file. SBL 24-June-1983
68 0068 1 | --

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; 70      0069 1 |  
; 71      0070 1 | PROLOGUE FILE:  
; 72      0071 1 |  
; 73      0072 1 |  
; 74      0073 1 | REQUIRE 'RTLIN:LIBPROLOG';           ! LIB$ definitions  
; 75      0144 1 |  
; 76      0145 1 | TABLE OF CONTENTS:  
; 77      0146 1 |  
; 78      0147 1 |  
; 79      0148 1 |  
; 80      0149 1 | FORWARD ROUTINE  
; 81      0150 1 | LIB$PUT_OUTPUT;          ! Output string on device SYSSOUTPUT  
; 82      0151 1 |  
; 83      0152 1 |  
; 84      0153 1 | MACROS:  
; 85      0154 1 |  
; 86      0155 1 |  
; 87      0156 1 |  
; 88      0157 1 | EQUATED SYMBOLS:  
; 89      0158 1 |  
; 90      0159 1 |  
; 91      0160 1 |  
; 92      0161 1 | OWN STORAGE:  
; 93      0162 1 |  
; 94      0163 1 |  
; 95      0164 1 | OWN  
; 96      0165 1 |     SYS_OUTPUT_ISI: WORD INITIAL (0); ! ISI for SYSSOUTPUT  
; 97      0166 1 |  
; 98      0167 1 |  
; 99      0168 1 | EXTERNAL REFERENCES:  
;100     0169 1 |  
;101     0170 1 | EXTERNAL ROUTINE  
;102     0171 1 |     LIB$ANALYZE_SDESC_R2 : LIB$ANALYZE_SDESC_R2$LINKAGE;  
;103     0172 1 |           ! To extract length and address of 1st  
;104     0173 1 |           ! data byte from descriptor.  
;105     0174 1 |  
;106     0175 1 |
```

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108      0176 1 GLOBAL ROUTINE LIB$PUT_OUTPUT ( ! Output string to SYSSOUTPUT
109      0177 1
110      0178 1     MESSAGE           ! Adr. of string descriptor
111      0179 1
112      0180 1             ) = ! Value returned is RMS completion
113      0181 1             ! code
114      0182 1
115      0183 1     ++ FUNCTIONAL DESCRIPTION:
116      0184 1
117      0185 1     Outputs a record on device SYSSOUTPUT using RMS $PUT.
118      0186 1     On first call, device SYSSOUTPUT is opened
119      0187 1     (or created if it doesn't exist yet). Thus the logical
120      0188 1     name SYSSOUTPUT can be assigned to any file name in order
121      0189 1     to redirect I/O.
122      0190 1
123      0191 1     FORMAL PARAMETERS:
124      0192 1
125      0193 1     MESSAGE.rt.dx      Adr. of string descriptor of string
126      0194 1             to be output.
127      0195 1
128      0196 1     IMPLICIT INPUTS:
129      0197 1
130      0198 1     NONE
131      0199 1
132      0200 1     IMPLICIT OUTPUTS:
133      0201 1
134      0202 1     SYS_OUTPUT_ISI RMS internal stream id for all but first call
135      0203 1
136      0204 1     COMPLETION CODES:
137      0205 1
138      0206 1     RMS completion code
139      0207 1     or LIB$INVARG if descriptor is bad.
140      0208 1
141      0209 1     SIDE EFFECTS:
142      0210 1
143      0211 1     Opens (creates if not existent) file SYSSOUTPUT on first call.
144      0212 1
145      0213 1
146      0214 2     BEGIN
147      0215 2
148      0216 2     LOCAL
149      0217 2     RMS_STATUS,          ! RMS status
150      0218 2     FAB: $FAB_DECL,    ! FAB
151      0219 2     RAB: $RAB_DECL;   ! RAB
152      0220 2     MAP
153      0221 2     MESSAGE: REF BLOCK [, BYTE]; ! String descriptor
154      0222 2
155      0223 2     IF .SYS_OUTPUT_ISI EQL 0
156      0224 2     THEN
157      0225 2
158      0226 2     [+ First call, initialize FAB
159      0227 2     [-]
160      0228 2
161      0229 2
162      0230 3     BEGIN
163      P 0231 3     $FAB_INIT (
164      P 0232 3             FAB = FAB,
```

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: 165      P 0233 3      FAC = PUT,
: 166      P 0234 3      FNA = UPLIT ('SYSS$OUTPUT'),
: 167      P 0235 3      FNS = 10,
: 168      P 0236 3      RAT = CR,
: 169      P 0237 3
: 170      0238 3      FOP = CIF);
: 171      0239 3
: 172      0240 3
: 173      0241 3
: 174      0242 3      !+ Create SYSS$OUTPUT, open if exist and position to end-of-file,
: 175      0243 3      remember ISI
: 176      0244 3
: 177      0245 3
: 178      0246 3      RMS_STATUS = $CREATE (FAB = FAB);
: 179      0247 3      IF NOT .RMS_STATUS THEN RETURN .RMS_STATUS;
: 180      0248 3
: 181      0249 3
: 182      0250 3
: 183      P 0251 3      $RAB_INIT (
: 184      P 0252 3      FAB = FAB,           ! FAB address
: 185      P 0253 3      RAB = RAB,           ! RAB address
: 186      P 0254 3      ROP = EOF);        ! position at end-of-file if file exists
: 187      0255 3
: 188      0256 3      RMS_STATUS = $CONNECT (RAB = RAB); ! connect RAB to the file
: 189      0257 3      IF NOT .RMS_STATUS THEN RETURN .RMS_STATUS;
: 190      0258 3      SYS_OUTPUT_ISI = .RAB[RAB$W_ISI]; ! remember ISI
: 191      0259 3      END
: 192      0260 3
: 193      0261 3
: 194      0262 2      ELSE
: 195      0263 2
: 196      0264 2      !+ file already exist, just initialize RAB
: 197      0265 2      including internal stream identifier returned from first $OPEN
: 198      0266 2
: 199      0267 2
: 200      P 0268 3      BEGIN
: 201      P 0269 3      $RAB_INIT (
: 202      P 0270 3      FAB = FAB,           ! FAB address
: 203      P 0271 3      RAB = RAB,           ! RAB address
: 204      P 0272 3      ROP = EOF);        ! position at end-of-file if file exists
: 205      P 0273 3      RAB[RAB$W_ISI] = .SYS_OUTPUT_ISI;
: 206      P 0274 2      END;
: 207      0275 2
: 208      0276 2      !+ Setup buffer address and length on first and subsequent $PUTs
: 209      0277 2      ! If descriptor is bad, return status from LIB$ANALYZE_SDESC_R2.
: 210      0278 2
: 211      0279 2
: 212      0280 2
: 213      0281 2      IF .MESSAGE [DSC$B_CLASS] GTRU DSC$K_CLASS_D
: 214      0282 2      THEN ! Use generalized extract
: 215      0283 3      BEGIN
: 216      0284 3      LOCAL RET_STATUS;
: 217      0285 3      RET_STATUS = LIB$ANALYZE_SDESC_R2 (.MESSAGE ;
: 218      0286 3      RAB [RAB$W_RSZ], ! length
: 219      0287 3      RAB [RAB$L_RBF]); ! address
: 220      0288 3
: 221      0289 3      IF NOT .RET_STATUS THEN RETURN (.RET_STATUS) ;

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: 222      0290 3
: 223      0291 3      END
: 224      0292 3
: 225      0293 2      ELSE          ! Fetch length and address directly
: 226      0294 2
: 227      0295 3      BEGIN
: 228      0296 3      RAB[RAB$W_RSZ] = .MESSAGE[DSC$W_LENGTH];
: 229      0297 3      RAB[RAB$L_RBF] = .MESSAGE[DSC$A_POINTER];
: 230      0298 2      END;
: 231      0299 2      !+
: 232      0300 2      Output the string as a single record and return RMS completion status
: 233      0301 2      If error and it is RECORD STREAM ACTIVE, wait and try again, thus
: 234      0302 2      making routine AST re-entrant. Return $S$ NORMAL (00000001) if
: 235      0303 2      success, rather than LIB$ NORMAL (00010001).
: 236      0304 2
: 237      0305 2
: 238      0306 3      IF NOT $PUT (RAB = RAB)
: 239      0307 2      THEN
: 240      0308 2      WHILE .RAB[RAB$L_STS] EQL RMSS_RSA DO
: 241      0309 3      BEGIN
: 242      0310 3      SWAIT (RAB=RAB);
: 243      0311 3      SPUT (RAB=RAB);
: 244      0312 2      END;
: 245      0313 2
: 246      0314 2      RETURN (IF .RAB[RAB$L_STS] THEN $S$ NORMAL ELSE .RAB[RAB$L_STS]);
: 247      0315 2
: 248      0316 1      END;          ! End of routine LIB$PUT_OUTPUT

```

```

.TITLE LIB$PUT_OUTPUT Library $PUT on device SYSSOUTPU
.IDENT \1-006\
.PSECT _LIB$DATA,NOEXE, PIC,2

```

```
0000 00000 SYS_OUTPUT_ISI:
```

```
.WORD 0
```

```
.PSECT _LIB$CODE,NOWRT, SHR, PIC,2
```

```
00 00 54 55 50 54 55 4F 24 53 59 53 00000 P.AAA: .ASCII \SYSSOUTPUT\<0><0>
```

```
.EXTRN LIB$ANALYZE_SDESC R2
.EXTRN SYSSCREATE, SYSSCONNECT
.EXTRN SYSSPUT, SYSSWAIT
```

		01FC 00000	.ENTRY LIB\$PUT_OUTPUT, Save R2,R3,R4,R5,R6,R7,R8	0176
		58 00000000' EF 9E 00002	MOVAB SYS_OUTPUT_ISI, R8	
		57 00000000G 00 9E 00009	MOVAB SYSSPUT, R7	
		5E FF6C CE 9E 00010	MOVAB -148(SP), SP	
		56 68 3C 00015	MOVZWL SYS_OUTPUT_ISI, R6	0223
		6B 12 00018	BNEQ 3\$	
0050	8F	00 6E 00 2C 0001A	MOVC5 #0, (SP), #0, #80, SRMS_PTR	0238
		44 AE 5003 AE 00021	MOVW #20483, SRMS_PTR	
		48 AE 02000000 8F B0 00023	MOVL #33554432, SRMS_PTR+4	
		5A AE 01 90 00031	MOVB #1, SRMS_PTR+22	

**LIB\$PUT_OUTPUT Library \$PUT on device SYSS\$OUTPUT
1-006**

D 3
16-Sep-1984 01:08:17 VAX-11 Bliss-32 V4.0-742
14-Sep-1984 12:39:18 [LIBRTL.SRC]LIBPUTOUT.B32;1

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LIB
V03

; Routine Size: 248 bytes, Routine Base: _LIB\$CODE + 000C

; 249 0317 1 END

! End of module LIB\$PUT_OUTPUT

LIB\$PUT_OUTPUT Library \$PUT on device SYSS\$OUTPUT
1-006

E 3
16-Sep-1984 01:08:17
14-Sep-1984 12:39:18 VAX-11 Bliss-32 V4.0-742
[LIBRTL.SRC]LIBPUTOUT.B32;1

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: 250 0318 0 ELUDOM

LIE
VO:

PSECT SUMMARY

Name	Bytes	Attributes
-LIB\$DATA	2 NOVEC, WRT, RD ,NOEXE,NOSHR, LCL, REL, CON, PIC,ALIGN(2)	
-LIB\$CODE	260 NOVEC,NOWRT, RD , EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)	

Library Statistics

File	Total	Symbols	Pages	Processing
	Loaded	Percent	Mapped	Time
-\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	78	0	00:00.7
-\$255\$DUA28:[LIBRTL.OBJ]RTLLIB.L32;1	36	1	2	00:00.1

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:LIBPUTOUT/OBJ=OBJ\$:LIBPUTOUT MSRC\$:LIBPUTOUT/UPDATE=(ENH\$:LIBPUTOUT
)

Size: 248 code + 14 data bytes
Run Time: 00:06.1
Elapsed Time: 00:28.9
Lines/CPU Min: 3107
Lexemes/CPU-Min: 54068
Memory Used: 118 pages
Compilation Complete

; 1

0209 AH-BT13A-SE
VAX/VMS V4.0

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